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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/205,056	12/03/1998	JEAN-PIERRE DATH	F-722	9184

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EXAMINER

NORTON, NADINE GEORGIANNA

ART UNIT PAPER NUMBER

1764

DATE MAILED: 06/24/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/205,056

Applicant(s)

DATH ET AL.

Examiner

Nadine Norton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 12, 13 and 15-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12, 13 and 15-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Withdrawal of Claim Objections

Applicants' amendments filed 4-12-02 in paper no.19 are sufficient to overcome the previous objections to the claims.

Withdrawal of Claim Rejections Under 35 USC § 112

Applicants' amendments filed 4-12-02 in paper no.19 are sufficient to overcome the previous 112 rejections to the claims.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 5-9, 12-13 and 15-22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP0109060.

Applicants are claiming a process for the production of propylene from an olefinic feedstock containing at least one olefin of C₄ or greater. The process comprises contacting an olefin feedstock with an MFI catalyst as defined in applicants' claim 1.

The reference of EP0109060 discloses a process for the production of propylene from an olefinic feed containing 4 to 12 carbon atoms. See abstract, lines 1-2. EP0109060 teaches that the olefinic feed is contacted with a ZSM-5 or silicalite. See page 1, lines 30-31. The ZSM-5 has a SiO₂ / Al₂O₃ molar ratio of greater than or equal to 350. See page 1, lines 31-32. The reference teaches process conditions including a temperature of 400-600 °C, a space velocity of 5-200 kg/hr and a pressure of 1.5 to 7.5 atm. See page 1, lines 31-35 and page 2, lines 7-8.

The reference of EP0109060 succeeds at disclosing a process for the production of propylene from an olefin feed in the presence of a catalyst with components corresponding to those claimed by applicants (i.e. ZSM-5 or silicalite type). The reference's disclosure of ZSM-5 and silicalite encompasses applicants' claimed MFI structure because such compositions possess MFI structure by definition.

It is noted that the reference of EP0109060 does not disclose applicants' newly added catalyst method of making limitations. However, such limitations are considered to be product by process limitations which do not distinguish the claimed catalyst over the catalyst disclosed by the applied art. It has been held that, patentability is based on the final composition and not the method by which it was made. In re Marosi, 218 USPQ (Fed. Cir. 1983) and In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985).

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It is noted that the reference is silent about the relative percentages of propylene in the product effluent. However, applicants' claimed propylene percentage would inherently be produced because the same feed subjected to the same process conditions/catalyst would accomplish the same conversion percentage.

Applicants' propylene production is anticipated by the reference of EP0109060 because the reference discloses essentially the same catalyst contacting steps and overlapping process conditions.

In the alternative, applicants' propylene percentage in the product effluent would inherently be produced upon accomplishing the process of EP0109060.

Claim Rejections - 35 USC § 103

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP0109060.

It is noted that the reference of EP0109060 does not disclose applicants' specific paraffin containing feedstocks defined in claims 2-4. For instance, the reference does not disclose whether the paraffinic feed is obtained from cracked naphtha, steam cracking, etc.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize any olefinic feedstock known to contain the C4-C12 components required in the EP0109060 feed, including the specific feeds defined in claims 2-4, because the reference of EP0109060 does not limit the source of the feed. It is within the level of ordinary skill in the art to employ an acceptable feed from any known source. Since the specific feeds defined in applicants' claims 2-4 are known to contain C4 olefins, they are obvious to use if available.

Response to Arguments

Applicants' arguments filed 4-12-02 in paper no.19 have been fully considered but they are not persuasive.

Applicants' arguments asserting that applicants' claims include steps that are not disclosed or rendered obvious by EP 060, such as applicants' steaming and complexing steps, are not persuasive in overcoming the rejection. In response, it is maintained that the steps applicants' are referring to are limitations defining how the catalyst employed in claimed process is made. Such limitations are considered to be product by process limitations which do not distinguish the catalyst employed in applicants' invention over the final composition employed in the prior art. Since applicants are attempting to distinguish the claimed process over the applied art by the method in which the catalyst is made, patentability rests in the catalyst. It has been held that, patentability is based on the final composition and not the method by which it was made. In re Marosi, 218 USPQ (Fed. Cir. 1983) and In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985). Contrary to applicants' assertion that the aforementioned case law is only applicable to product claims, it is maintained that the case law is applicable to the present case because applicants' are attempting to rely on product by process limitations within the claimed process for patentability. It is logical to apply the same standard of patentability to product by process limitations whether they appear in product claims or method claims.

Applicants' arguments asserting that the examiner has provided no reasoning that the disclosed catalyst is identical to the catalyst claimed by applicants is not persuasive. It is maintained that the rejection above contains the reasoning that the reference's disclosure of

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ZSM-5 and silicalite encompasses applicants' claimed MFI structure because such compositions possess MFI structure by definition.

Applicants' argument that the EP'060 suggests that the silicon/aluminum ratio is of no consequence is not persuasive in overcoming the rejection. In response, it is maintained that the reference would not have defined silicon/aluminum ratios if the ratio is of no consequence. Since the reference specifically discloses a silicon/aluminum ratio with overlapping ranges (e.g. a ratio equal or greater than 350) it is considered to anticipate applicants' overlapping claimed range. In addition, applicants' pointing to one example outside applicants' claimed range does not discount the disclosure of a ratio of equal or greater than 350.

Applicants' argument that the feedstream in applicants' claims 2-4 are not suggested by the applied art is not sufficient to overcome the rejection. In response, it is maintained that it is within the level of ordinary skill in the art to employ C4 containing feeds from any known source. Applicants have not successfully argued why a skilled artisan would not use any known source of C4 in the '060 process.

Furthermore, applicants' cited examples do not show unexpected results for the method of making limitations because they do not compare catalysts with the same final atomic ratio made by different methods is maintained. Since the same final composition (i.e. one with the same "final" silica/alumina ratio) can be prepared by different methods, unexpected results need to be shown by comparing the same final composition made by different methods. Applicants' results are not comparative to the closest prior art of 060.

In addition, it is maintained that selecting overlapping parameters in the process of '060 would produce the same propylene content in the effluent.

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THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nadine Norton whose telephone number is 703-305-2667. The examiner can normally be reached on Monday through Thursday from 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marian Knode can be reached on 703-308-4311. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0661.

N.P.

June 21, 2002

NADINE G. NORTON
PRIMARY EXAMINER

